

WHAT IS CLAIMED IS:

1. An electronically commutated brushless motor comprising:
 - a motor housing;
 - a bulge formed in a sidewall of said motor housing; and
 - a capacitor assembly including a printed circuit board and at least one capacitor, said capacitor assembly housed in said bulge.
2. The motor of Claim 1 wherein said capacitor assembly is slideably inserted into said bulge.
3. The motor of Claim 1 wherein said bulge comprises a plurality of channels located along an inside surface of a sidewall of said bulge.
4. The motor of Claim 3 wherein said capacitor assembly comprises:
 - a capacitor printed circuit board (PCB) comprising a plurality of longitudinal edges; and
 - at least one capacitor mounted on said capacitor PCB.
5. The motor of Claim 4 wherein said longitudinal edges of said capacitor PCB are slideably inserted in said channels.

7. The motor of Claim 6 wherein said stiffeners have a tapered shape, and said channels have correspondingly tapered shape.

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8. A method for constructing an electronically commutated brushless motor, said method comprising:

providing a motor housing having a bulge formed in a sidewall of the motor housing; and

providing a capacitor assembly; and

slideably inserting the capacitor assembly in the bulge.

9. The method of Claim 8 wherein providing a capacitor assembly comprises:

providing a capacitor printed circuit board (PCB) having a plurality of longitudinal edges; and

mounting at least one capacitor on the capacitor PCB.

10. The method of Claim 9 wherein slideably inserting comprises:

providing a plurality of channels along an inside surface of a sidewall of the bulge; and

slideably inserting the longitudinal edges of the capacitor PCB in the channels.

11. The method of Claim 8 wherein providing a capacitor assembly comprises:

providing a capacitor PCB having a plurality of longitudinal edges;

mounting at least one capacitor on the capacitor PCB; and

attaching a stiffener to each longitudinal edge.

12. The method of Claim 11 wherein slideably inserting comprises:

providing a plurality of channels along an inside surface of a sidewall of the bulge; and

slideably inserting the stiffeners in the channels.

13. The method of Claim 11 wherein attaching a stiffener comprises attaching a drafted stiffener having a tapered shape to each longitudinal edge.

14. The method of Claim 13 wherein slideably inserting comprises:

providing a plurality of channels located along an inside surface of a sidewall of the bulge, the channels having a tapered shape corresponding to the tapered shape of the drafted stiffeners; and



slideably inserting the drafted stiffeners in the tapered channels.

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15. An electronically commutated brushless motor comprising:

a motor housing comprising a bulge formed in a sidewall of said motor housing;

a plurality of channels located along an inside surface of a sidewall of said bulge; and

a capacitor assembly slideably inserted in said bulge utilizing said channels.

16. The motor of Claim 15 wherein said capacitor assembly comprises:

a capacitor printed circuit board (PCB) comprising a plurality of longitudinal edges, said longitudinal edges slideably inserted in said channels; and

at least one capacitor mounted on said capacitor PCB.

17. The motor of Claim 15 wherein said capacitor assembly comprises:

a capacitor PCB comprising a plurality of longitudinal edges,

at least one capacitor mounted on said capacitor PCB; and

a stiffener attached to each of said longitudinal edges of said capacitor PCB, said stiffeners slideably inserted in said channels.

18. The motor of Claim 15 wherein said capacitor assembly comprises:

a capacitor PCB comprising a plurality of longitudinal edges,

at least one capacitor mounted on said capacitor PCB; and

a drafted stiffener having a tapered shape attached to each of said longitudinal edges of said capacitor PCB.

19. The motor of Claim 18 wherein said channels have a tapered shape corresponding to the tapered shape of said drafted stiffeners, and wherein said drafted stiffeners are slideably inserted in said tapered channels.